

REMARKS

Claims 1-14 are pending in the present application. Claims 1, 5, 13 and 14 have been amended. Claims 1, 13 and 14 are independent. The specification has been amended. Reconsideration of this application, as amended, is respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 1, 5 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Becker, USPN 4,558,996 and in further view of Lepak, USPN 3,644,068 referenced by Tsukada, USPN 4,969,808. Claims 7 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Becker, as modified by Lepak referenced by Tsukada as applied to claims 1 and 5, and further in view of Ohira et al., JP 60088885. Claims 1, 3 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Beller et al., U.S. Application Publication No. 2002/0001527 and further in view of Lepak, referenced by Tsukada. Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Beller et al., as modified by Lepak referenced by Tsukada, as applied to claim 3, and further in view of Ohira et al. Claims 2, 4 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Beller et al., as modified by Lepak and Tsukada, as applied to claim 1, and further in view of Knapp et al., USPN 5,387,088 and Suzuki et al., USPN 5,929,589. Claims 2, 6 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Becker, as modified by Lepak and Tsukada as applied to claim 1, and

further in view of Knapp et al. and Suzuki et al. Claims 8 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Becker as, as modified by Lepak, Tsukada, Knapp and Suzuki et al., as applied to claims 2 and 6, and further in view of Ohira et al. Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Beller et al., as modified by Lepak, Tsukada, Knapp and Suzuki et al., as applied to claim 4, and further view of Ohira et al. These rejections are respectfully traversed.

The present invention is directed to a roller pump. Independent claims 1, 13 and 14 recite a combination of elements including the recitation "wherein said pump housing and said reduction gear case are formed from a single, one-piece member." Applicants respectfully submitted that the references relied on by the Examiner fail to teach or suggest the present invention as recited in independent claims 1, 13 and 14.

In the Examiner's Office Action, at page 14, the Examiner has taken the position that the term "integrated" is taught by the combination of Becker/Beller et al., Lepak and Tsukada, since the term "integrated" means to join with something else; unite," or "to make part of a larger unit." Although Applicants do not completely agree with the Examiner's position, in order to expedite prosecution, independent claims 1, 13 and 14 have been amended to clarify the present invention and recite "wherein said pump housing and said reduction gear case are formed from a single, one-piece member."

The present invention includes a pump housing 1 and a reduction gear case (that houses reduction gear 9) that are formed from a single member. This can be clearly

understood from page 1, paragraph [0003] of the present specification, which describes the prior art reduction gear being housed in a "separated independent case" and page 6, paragraph [0018] of the present specification that describes the reduction gear of the present invention as being "integrated in one body" with the pump housing.

Referring to the Becker and Beller et al. references, these references disclose roller pumps that include a pump housing. The Examiner recognizes that the Becker and Beller et al. references fail to disclose a driver driving the drive shaft through a reduction gear as recited in the independent claims of the present invention. However, the Examiner relies on the Lepak and Tsukada references to respectively modify the Becker and Beller et al. references to arrive at the present invention.

While not commenting on the appropriateness of the Examiner's modifications, Applicants respectfully submit that even if the Becker and Beller et al. references were modified in the manner suggested by the Examiner, the combination of references would not arrive at the present invention as recited in independent claims 1, 13 and 14.

Referring to the Lepak reference, this reference clearly discloses a case means 16, end cap 18, gear box 14 and motor 12 which are housed within separate cases that are connected together to form the pump arrangement 10. In addition, referring to the Tsukada reference, the motor 21, reduction gears 22 and body 11 are illustrated as being formed from separate elements. In the present invention; however, the pump housing and the reduction gear case are "formed from a single, one-piece member." In view of this, the

Examiner's rejections of independent claims 1, 13 and 14 of the present invention are improper and should be withdrawn.

Referring to page 14 of the Examiner's Office Action, it becomes clear that the Examiner recognizes that the Tsukada and Lepak references disclose a pump housing and reduction gear case that are formed from separate members. However, due to the Applicants use of the term "integrated," the Examiner has taken the position that these references disclose the present invention as previously recited in independent claims 1, 13 and 14. However, in view of the above amendments to the independent claims to clarify that the pump housing and the reduction gear case are "formed from a single, one-piece member," Applicants respectfully submit that the present claims clearly define over the references relied on by the Examiner.

With regard to dependent claims 2-12, Applicants respectfully submit that these claims are allowable due to their dependence upon allowable independent claim 1, as well as due to the additional recitations in these claims.

With specific regard to dependent claims 3-6 and independent claims 13 and 14, Applicants respectfully submit that these claims further define the present invention over the references relied on by the Examiner. Specifically, the Examiner asserts that Beller et al. discloses the shape of the inner surface 3 as recited in claims 3, 4 and 13. However, referring to FIG. 4 of Beller et al., the support means 11 appears to be formed of a circular housing, which does not include a "partial circle of which center is shifted from the center of

said drive shaft" as recited in claims 3, 4 and 13. In view of this, these claims define over the Beller et al. reference for this additional reason.

With regard to claims 5, 6 and 14, the Examiner asserts that Becker discloses the shape of the inner surface 3 as recited in these claims. Referring to FIG. 6 of Becker, the ramp 63 is not a "partial circle" as recited in claims 5, 6 and 14. The ramp 63 appears to be a flat surface that extends from the curved inside surface 62. At column 11, lines 32-37 of Becker, it is described that the ramps 63 provide "an opportunity to have over some minimum radius most adjacent the inlet and outlet orifice 18 and 20 a greater radius (here 1.844") so that the resilient collapsible tube is only occluded through a predetermined space." However, this portion of Becker does not indicate that the ramp 63 is a curved surface and therefore cannot be considered a "partial circle" as recited in claims 5, 6 and 14 of the present application.

In view of the above amendments and remarks, Applicants respectfully submit that claims 1-14 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the Examiner's rejections under 35 U.S.C. § 103 are respectfully requested.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Paul C. Lewis, Registration No. 43,368 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By: 

Paul C. Lewis, #43,368
P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000